



Applying Backward Design Concepts During the Development of a National, Advanced Clinical Decision-Making Course for Physical Therapists

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INTRODUCTION

- Backwards Design (BWD) involves starting with the end objectives in mind.
- Assessment methods, learning activities, and course content are developed to support learning objectives rather than the other way around.
- The advanced post-professional course for physical therapists that have completed the Certified Exercise Expert for Aging Adults (CEEAA) series was developed using Backwards Design.

BACKGROUND

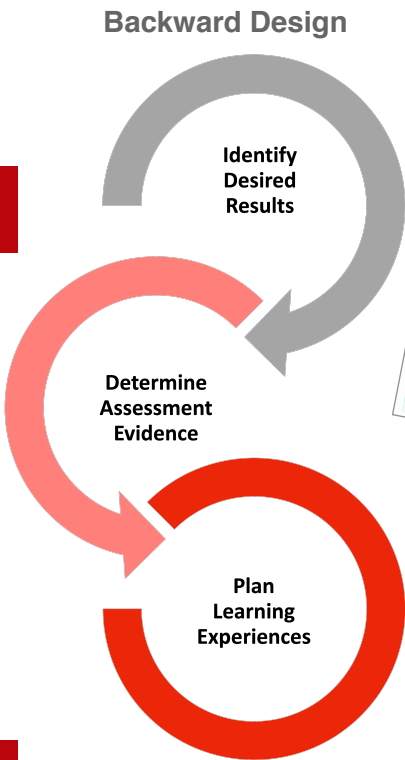
- The CEEAA course series addresses the “what” and “how” regarding prescribing appropriate exercises to aging adults.
- The Advanced CEEAA course further develops clinical-decision making skills to answer the “why”.
- The advanced course’s primary goal was to change clinical practice, not just knowledge.
- In order to achieve this result, learning activities would need to include active engagement with the material and practice using the case-based information to design targeted exercise plans.
- Clinicians would also need to integrate contextual factors including social determinants of health and a movement systems analysis, augmented by collaborative decision making and reflection on the clinical-decision making process.

METHODS

- In accordance with BWD, CEEAA Faculty began the development of the Advanced CEEAA course by first reaching consensus on seven course objectives.
- The objectives guided creation of the assessments, followed by learning activities and embedded formative assessments.
- Collaborative learning pedagogy was emphasized as a means of promoting reflection and debate regarding clinical decision making.
- Learning experiences included video movement analysis, case analysis & synthesis, and group case presentations.
- Participant feedback regarding integration of course core concepts was collected immediately post-course and three- and six-months post-course via an electronic survey.



The Advanced CEEAA course provides physical therapists the opportunity to further develop clinical reasoning skills related to ageing adults with various levels of complexity and across the continuum of care. The **desired result** is for the Credentialed Exercise Expert for Ageing Adults to integrate the CEEAA content into clinical practice.



Assessment Evidence

Advanced CEEAA 6-Month Follow-up Survey

Now that six months have passed since you completed the Advanced Credentialed Exercise Expert for the Aging Adult (Advanced CEEAA) course, we would like to ask you again about how well the course prepared you to do each of the following.

After six months, how well did the course prepare you to...

	Not at all (1)	Slightly (2)	Somewhat (3)	Very (4)	Extremely (5)
...categorize tests and measures by integrating the ICF framework, movement system analysis and Patient Client management model?					
...prioritize the selection of tests and measures for the types of patient scenarios presented during the course?					
...describe why you would select a particular test for the types of patient scenarios presented during the course?					
...integrate functional movement analysis into the development of problem lists and goals?					
...describe the implications of various test outcomes to direct the plan of care?					

Still thinking about the course, how...

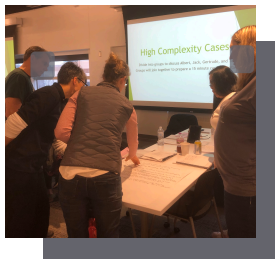
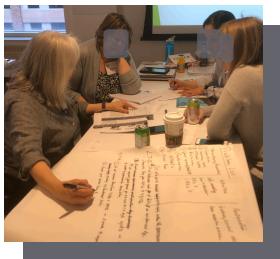
Now that six months have passed since you completed the Advanced Credentialed Exercise Expert for the Aging Adult (Advanced CEEAA) course, we would like to ask you again about how well the course prepared you to do each of the following.

After six months, how much have you integrated information from the course into your clinical practice?

Not at all (1)
A little (2)
Some (3)
Quite a bit (4)
A great deal (5)

Participant feedback included open-ended responses and nine questions with Likert-type responses (1=not all; 5=extremely)

Learning Experiences



Participants engaged in case-based team activities including evaluation of tests and measures, integration of social determinants of health and movement systems analysis and development of patient specific exercise prescriptions for a variety of rehabilitation settings. The culminating activity was a case presentation to the other course attendees.

RESULTS

- Pairwise Mann-Whitney Wilcoxon tests determined if differences across two consecutive time points existed when the overall test for a given survey question was significant ($p < 0.05$)
- Three months post-course, 62.5% of course participants indicated they integrated course information “quite a bit to a great deal” into their clinical practice
- 57.14% felt this same way six months post-course, which was not statistically different from 3-months

CONCLUSION

- Participants’ feedback suggests the implementation of BWD was successful in affecting clinical decision-making skills at least up to 6 months post-course.

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